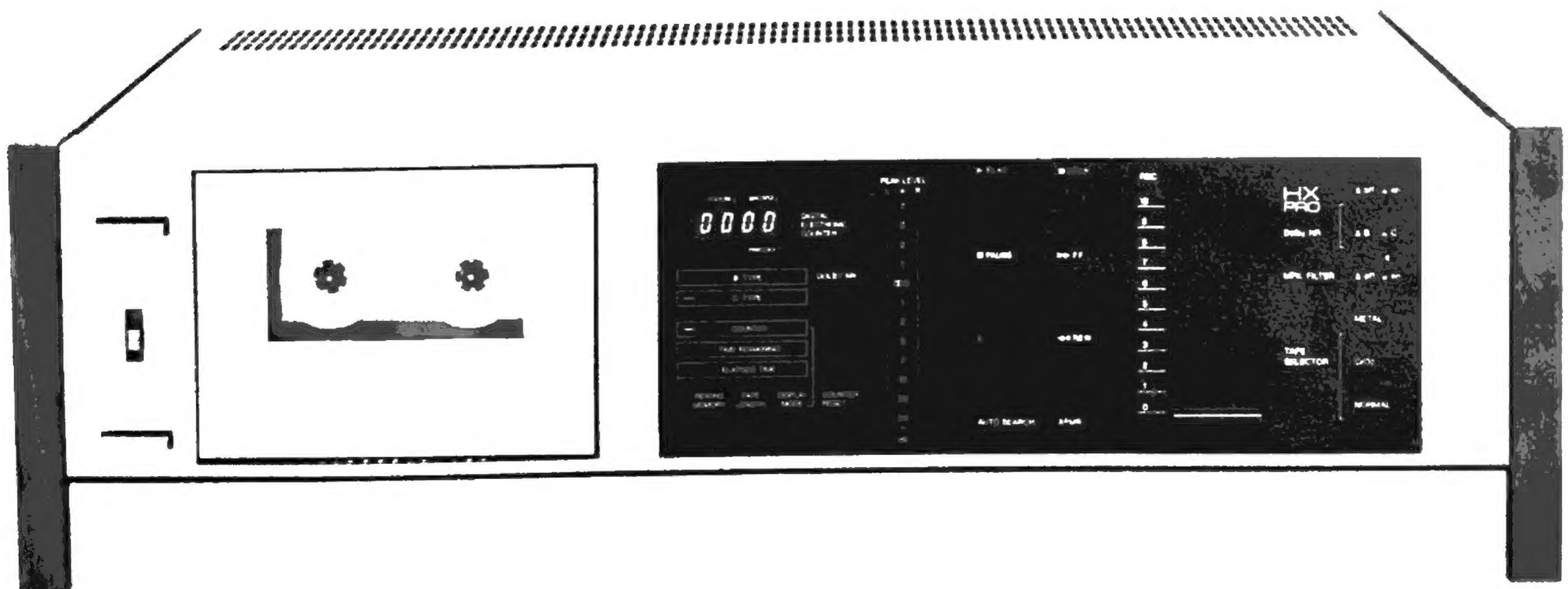


Dual-capstan Cassette Tape Deck D-811

Instruction Manual





CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert you of the presence of uninsulated dangerous voltage within the unit's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert you of the presence of important operating and maintenance instructions in the literature accompanying the unit.

WARNING

TO PREVENT FIRE OR SHOCK HAZARD. DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Dolby noise reduction and HX PRO headroom extension system manufactured under license from Dolby Laboratories Licensing Corporation. HX PRO originated by Bang and Olufsen. "Dolby", the double-D symbol and HX PRO are trademarks of Dolby Laboratories Licensing Corporation.

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The model and serial number are located at the rear of the unit.

Record the serial number in the space provided below. Refer to them whenever you call upon your Kyocera dealer regarding the unit.

Dual-capstan Cassette Tape Deck

Kyocera D-811

Serial No. _____

Features

The Kyocera D-811 features the following:

- Wide dynamic range provided by the HX PRO head-room extension system. It provides optimum bias current according to the level and frequency spectrum of the input signal to obtain wide dynamic high frequency range.
- Dolby B/C noise reduction system dramatically reduces tape hiss noise.
- APMR(Automatic Program Mute Recording) puts 4 second breaks between programs for easy search.
- Multi function memory play enables versatile playback such as auto-play, auto-repeat, memory-stop.
- Recording level calibration oscillator for easy setting of the recording level.
- Direct-drive dual-capstan closed loop drive system assures precision tape control.
- Three motor drive silent operation mechanism with gentle motor driven head positioning.
- Durable sendust alloy head for recording and playback, provides long lasting quality performance.
- Fine bias control provides optimum bias settings for various kind of tape format.
- Seperate R+L LED record indicators with convenient peak hold.
- Extendable operation in conjunction with the optional remote control center RC-101 and the wireless remote control hand unit RT-102.

Installation

Unpacking

Unpack your unit carefully. Be sure to remove the accessories. After unpacking, inspect the unit carefully for signs of damage. If damage is found, contact your authorized Kyocera dealer at once.

Do not throw away the carton or associated packing materials. They are ideal for moving, and in the event that servicing is needed, will be required for shipment.

Installation

Installation of your tape deck is not complicated; however, following the guidelines below will help to assure you of safe and satisfactory performance for many years.

- Do not remove the cover of the unit as there are no user-serviceable parts inside.
- Do not expose the deck to excessive dust, moisture or direct sources of heat.
- If mounted where ventilation may be restricted, care must be taken to provide a minimum opening of 50 square inches for free air movement.
- Clean by wiping with a soft cloth moistened with household window cleaner. Do not use volatile cleaning or thinning chemicals such as acetone or gasoline (petrol) as they may damage the finish.
- To ensure maximum performance and life expectancy from this tape deck, while at the same time understanding the potential hazards involved with its use in association with other components in the system, read the Safety Instructions leaflet supplied with the unit.

AC power requirement

The operating voltage of the unit must be the same as the voltage of your power source. In the U.S.A., this is 120V, 60Hz AC(Actual voltage may vary from as high as 125V to as low as 90V during peak power usage periods).

Check the rear of the unit to insure that it will operate properly on your power source. If the label indicates voltages not appropriate for your area, or if you are not sure, contact your authorized Kyocera dealer.

Precautions

Do not place the tape deck above or directly in the heated airflow of large heat productive equipment. Excessive heat will change the characteristics of sensitive parts, and, in extreme conditions, actually reduce the reliability of the tape deck.

The record and/or playback heads are very sensitive to magnetic fields. Do not place electrical equipment with large power transformers directly on top of the deck. If there is a constant hum noise from your loudspeaker during playback, check to see if moving other components away from the tape deck reduces the hum noise.

Connections

The AC power cord should not be plugged into the wall socket before making any connections. (Also turn off the deck's power whenever you connect or disconnect the audio cables to the tape deck.)

1 INPUT jacks

Connect the INPUT jacks of the tape deck to the tape output jacks of your stereo set (amplifier or receiver, etc.). Generally these jacks are marked TAPE REC or TAPE OUT. Of the shielded cables connected to the jacks, the white plug is for the left channel; the red plug is for the right channel.

Check for the tight insertion of the plug into the jack as a loose connection of the plug may cause hum and noises or intermittent audio.

2 OUTPUT jacks

Connect the OUTPUT jacks of the tape deck to tape input jacks of your stereo set (amplifier or receiver, etc.). Generally these jacks are marked TAPE PLAY or TAPE IN. Of the shielded cables connected to the jacks, the white plug is for the left channel; the red plug is for the right channel.

Check for the tight insertion of the plug into the jack as a loose connection of the plug may cause hum and noises or intermittent audio.

3 Accessory AC OUTLET

The tape deck provides one UNSWITCHED outlet. It is always powered as long as the tape deck is plugged into a wall outlet. It will supply 120V AC, and is generally used for connection of the power cord from other audio components (tuner, CD player, etc.). Do not use an equipment rated at more than 200W of power in this outlet.

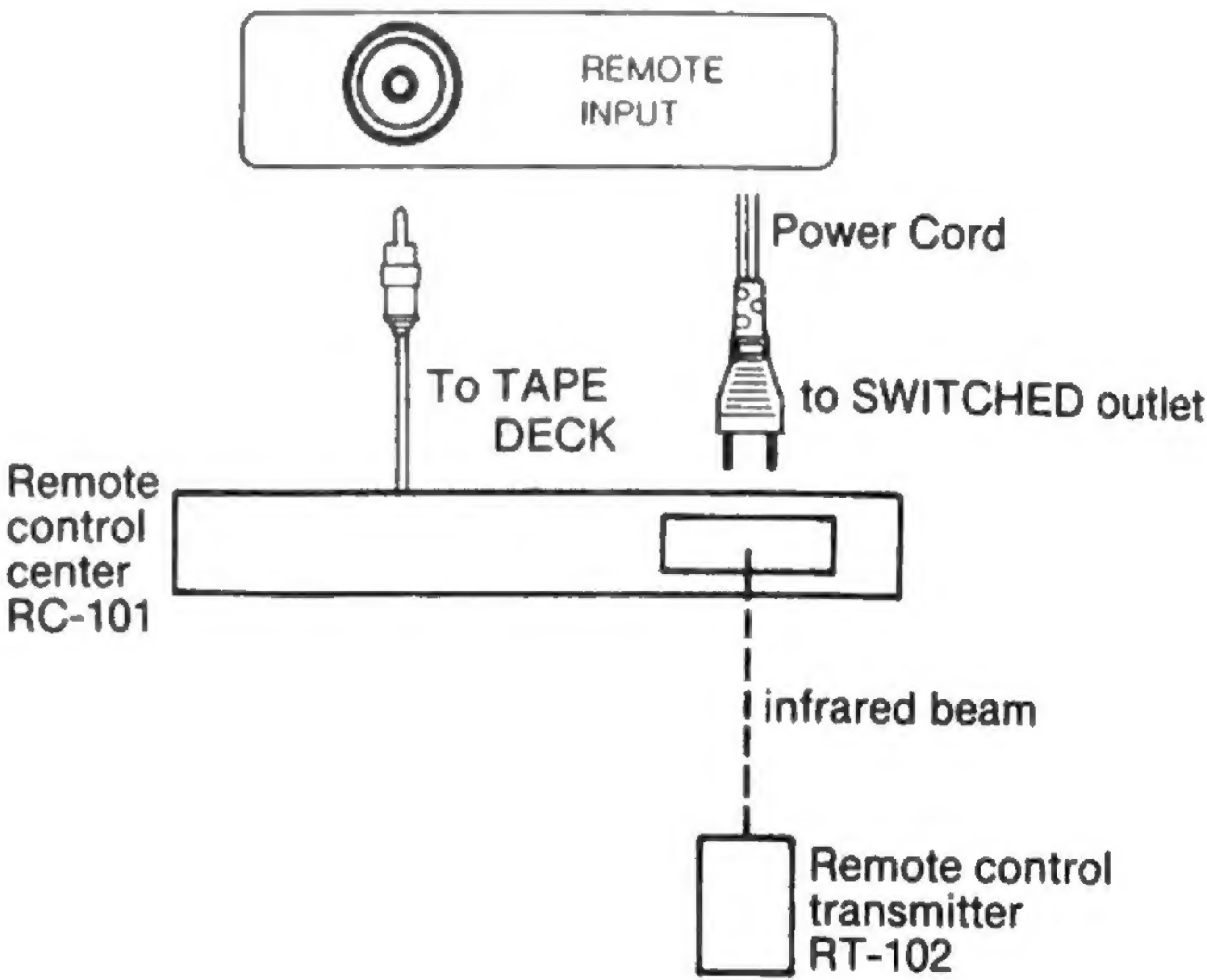
4 Power cord

Check to make sure that the POWER button on the front panel of the tape deck is in the off (released) position. Check to insure the equipment plugged into the accessory outlet is also turned off. Now connect the AC power cord to an conventional AC wall outlet.

5 REMOTE INPUT jack

The tape deck can be remote-control-operated using the optional remote control center RC-101 and the remote control transmitter RT-102. Connect the CONTROL SIGNAL OUTPUT on the rear of the RC-101 using the shielded signal cable provided (this cable carries the remote control command signals to operate the tape deck) to the REMOTE INPUT jack on the rear of the deck.

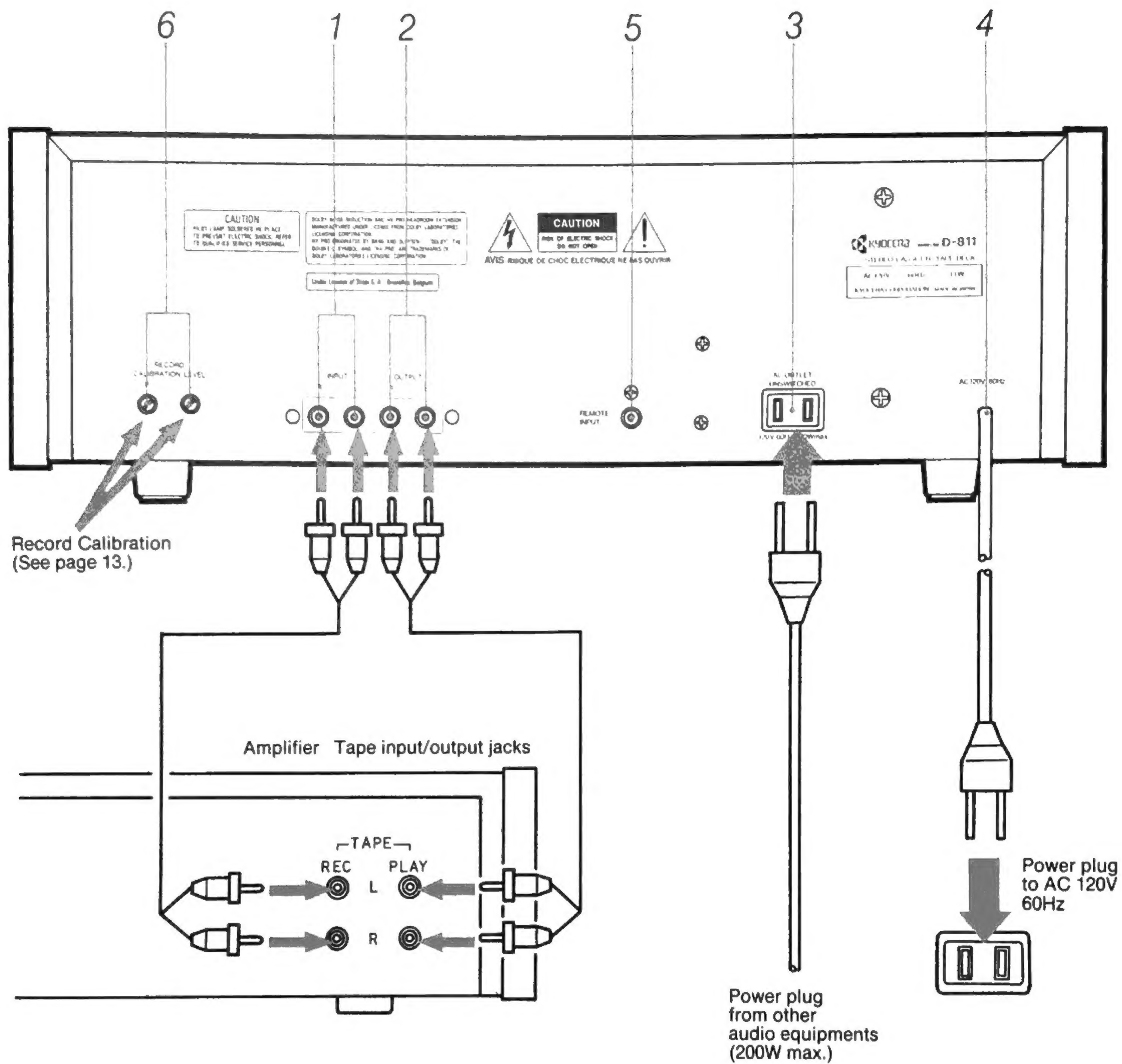
(For connecting and operating details of the remote control system, refer to the instructions accompanying the remote control center.)



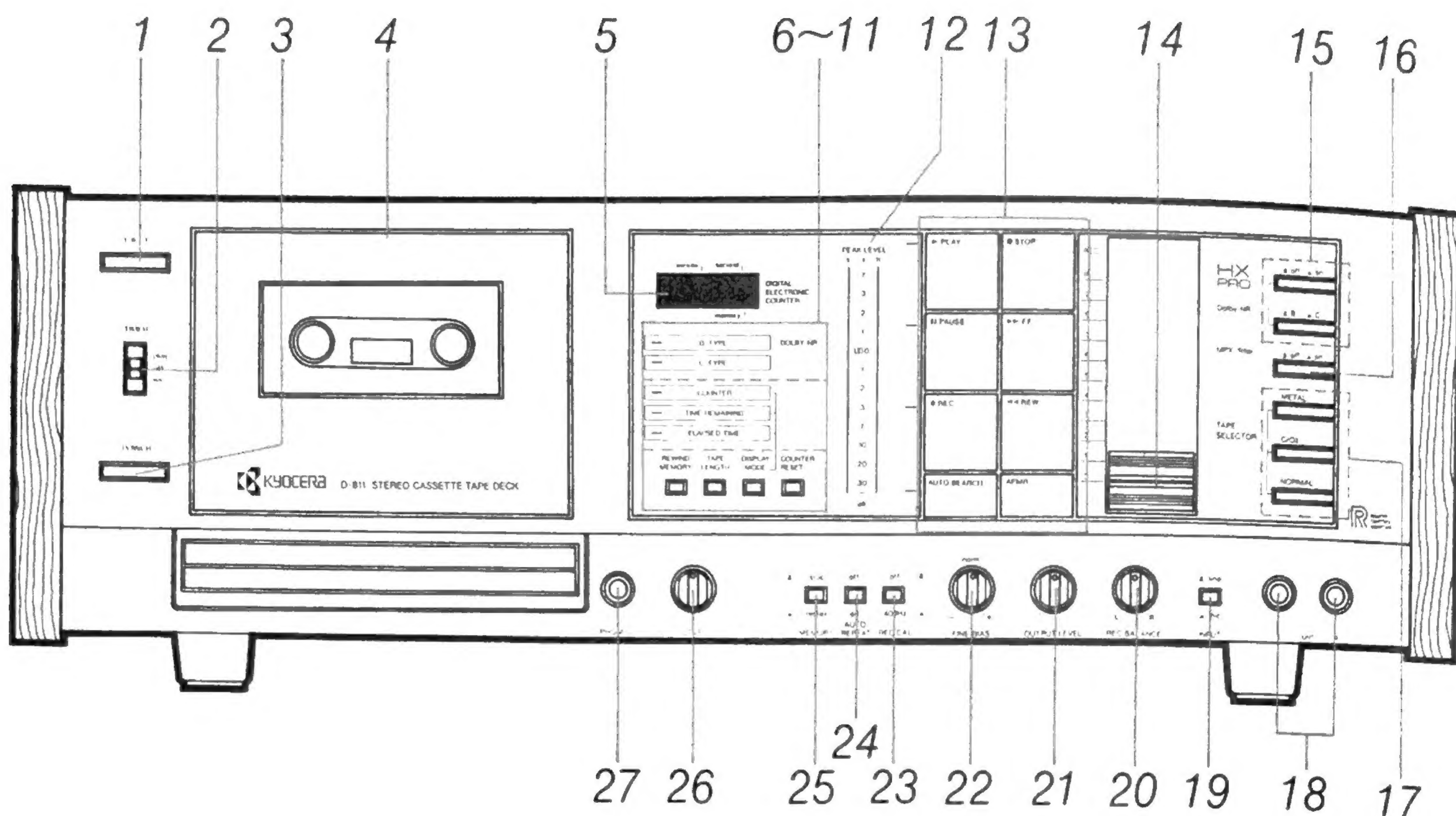
6 RECORD CALIBRATION LEVEL controls

These controls adjust the output level of the recording calibrator which are very useful for the proper setting of recording level.

Connection diagram



Function of controls



1 POWER button

Depress to turn on the power and the indicator will light up.

2 TIMER mode selector switch

If the tape deck is connected to an auto timer, the tape deck power is then controlled by the timer. When this switch is in the "play" position, the tape deck starts playing after it is powered by the timer. When in the "rec" position, the tape deck starts recording after automatically powered. When in the off position, the tape deck does not start playing or recording automatically by the timer.

3 EJECT button

Press to eject the cassette tape in the compartment.

4 Cassette tape compartment

5 DIGITAL ELECTRONIC COUNTER

This counter is used in four ways, as a normal tape counter, an time remaining, an elapsed timer and as a tape length indicator. See about the DIGITAL ELECTRONIC COUNTER (page 8).

6 DOLBY NR indicators

Light up in accordance with the DOLBY NR B/C switches.

7 DISPLAY MODE indicators

Indicate the display mode in accordance with the DISPLAY MODE button selection.

8 REWIND MEMORY button

The tape deck memorizes the tape position when this button is pressed and simultaneously the memory indicator lights up. The memory is defeated by again-pressing this button.

9 TAPE LENGTH selector

Proper display of the counter can be achieved by pressing this switch, depending on the rated length of the tape which you will use.

- **C46L:** Select this display when a C-46 tape is used.
- **C-60:** When using a conventional C-46 or C-60 tape, select this display.
- **C-90:** When using a C-90 tape, select this display.

10 DISPLAY MODE selector

Determines the mode of the digital electronic counter.

- **TAPE COUNTER:** the counter operates as a 4-digit normal tape counter.
- **TIME REMAINING:** in recording and playback mode, the counter indicates remaining time during which the tape will run.
- **ELAPSED TIME:** the electronic counter acts as a stop watch and shows the elapsed time of the tape run.
- **Tape length indication:** should display the total length of the tape which you will use.

11 COUNTER RESET button

When pressed, this button resets the counter to 0000 in the tape counter mode and to 00:00 in the elapsed time mode. The previous rewind memory position is defeated by pressing this button.

12 PEAK LEVEL indicators

Indicate the peak level of record and playback signals.

13 Tape transport control buttons

Control the movement of the tape.

- **PLAY:** The tape deck starts playback when this button is pressed (the green LED will light up).
- **PAUSE:** Places the tape transport in a "waiting" mode. By pressing this button and the REC button at the same time, the tape deck will be in pause mode and ready for recording (the red LED and the orange LED will light up). Depress the PLAY button to start recording.
- **REC:** To make recording, depress this button and the PLAY button at the same time. The tape deck will start recording immediately.
- **STOP:** Press to cancel all tape motion of the tape transport.
- **FF:** Used for advancing the tape quickly.
- **REW:** Used for rewinding the tape at a high speed.
- **APMR** (auto program mute recording): Used to provide 4 second unrecorded gaps between the recorded program portions in the tape when recording.
- **AUTO SEARCH:** Searches for unrecorded areas between the programs, and plays the beginning part of the programs for 6 seconds. If you do not depress the PLAY button during the 6 seconds, the deck will search for the next program.

14 REC level control

Controls the recording level for both the left and right channels simultaneously. See Recording level setting.

15 Dolby NR buttons

These buttons are used to select the two types of the Dolby noise reduction systems - either B type or C type - for encoding the signal during recording and for decoding it during playback.

- **off/on button:** Switches in either type of the Dolby NR system, when depressed, then allows you to select the type B or C system to be used.
- **B/C button:** Release this button to select the B type Dolby NR and depress to select the C type Dolby NR simultaneously the indicator will light to confirm the selection.

16 MPX filter button

This button (when depressed) introduces a 19kHz filter for recording, that will prevent possible interference from the 19kHz stereo pilot signal that is present in every FM stereo receiver or tuner and which may have been insufficiently filtered in the FM stereo circuit. By setting this button to the on position (depressed) when recording FM stereo, you will eliminate any possible interference of stereo pilot signal.

17 TAPE SELECTOR switches (METAL/CrO₂/NORMAL)

Select proper bias and record/playback equalization for three different types of tapes: METAL for metal tapes, CrO₂ for chrome tapes, NORMAL for normal tapes.

18 MIC jacks

Left(L) and right(R) channel input jacks for microphones and will accept standard 2-conductor phone plug microphone of 200 to 10K ohms impedance. These jacks are designed for 1/4 inch phone plugs.

19 INPUT selector button (line/mic)

Selects either the LINE INPUT jacks on the rear panel of the deck (released-line) or allows the use of microphones (depressed-mic).

20 REC BALANCE control

Provides adjustment for proper balance of left and right channels of the recording input signals. Normally set this control to the center (12 o'clock) position.

21 OUTPUT LEVEL control

Adjusts the tape deck output signal to the amplifier and speakers.

22 Recording FINE BIAS control

Provides recording bias level adjustment for optimum recording result for the various brands of tapes. This control should normally be set to the detented (12 o'clock) position.

23 REC CAL (calibration) button

Used for record level calibration adjustment with the use of the RECORD CALIBRATION LEVEL control on the rear panel.

24 AUTO REPEAT button

Used to activate the automatic repeat feature. See page 10.

25 MEMORY button

- **stop:** When the button is depressed, and the deck is manually switched into rewinding, the rewinding will automatically stop at the position memorized previously.
- **replay:** When the switch is released, and the deck is manually switched into rewinding, the rewinding will stop at the position memorized previously and will again playback automatically.

26 PHONES LEVEL control

Adjusts the output level to the headphones.

27 PHONES jack

Standard stereo headphones with 1/4 inch plug may be connected to the PHONES jack for private playback listening or monitoring recording. Low impedance (8 ohms and up) headphones are recommended.

Note on tape selection

Choosing a high quality tape is extremely important. A sophisticated cassette deck, like your D-811 cannot be expected to deliver superior performance with an inferior tape. The various brands of tape on the market vary not only in the consistency and quality of the tape coating but also in the degree of mechanical perfection as well. The performance of an otherwise excellent tape marred by a poor housing, can result in skewing and other uneven tape travel characteristics.

● METAL

Metal tapes require very high bias and 70 μ S equalization. The tape deck is properly designed for these tapes which result in extremely low background noise characteristics and excellent high frequency response.

● CrO₂

Some premium tapes need higher bias levels and 70 μ S equalization to deliver the excellent performance expected from them. "Chrome, high-bias" tape should be recorded and played back with the CrO₂ button depressed.

● NORMAL

Most common tapes will be marked "Normal Bias, 120 μ S EQ". Press the NORMAL button on the deck for tapes of this type.

About the DIGITAL ELECTRONIC COUNTER

The flourescent, easy-to-read DIGITAL ELECTRONIC COUNTER can be used for three different modes of tape readings by pressing the DISPLAY MODE button.

1 Normal TAPE COUNTER mode

Initially the counter is set to this mode each time the power is switched on.

In this mode, the counter will allow you to index the program material on the tape in 4 digits and thus enable you to locate desired sections easily and quickly. The counter reads upwards towards **9999** when the tape moves in forward direction (for playback, recording or fast-forward), and downwards (back towards **0000**) when the tape is rewind. The counter is reset to **0000** at anytime by simply pressing the COUNTER RESET button.

Note

The counter will not be reset to **0000** when it is engaged in the TIME REMAINING or TIME ELAPSED mode. Also switching the DISPLAY MODE will not interrupt the TAPE COUNTER run.

2 TIME REMAINING mode

Press the DISPLAY MODE button to set the counter to the tape length indicator mode. (If the counter is in the TAPE COUNTER mode, you should press the DISPLAY MODE button three times.) Select an appropriate display of tape length by pressing the TAPE LENGTH button. If the tape is a C-60 type, set the counter to C-60.

Reset the display mode to time remaining now at normal tape run, during playback or recording, the electronic counter counts down time remaining during which the tape can run further.

When the counter is in time remaining or elapsed time and rewinding or fast-forward mode, the counter shows the direction of the tape run by a scanning dot. However when the counter is in the counter mode the numbers will increase or decrease depending upon the tape direction.

3 ELAPSED TIME mode

Press the DISPLAY MODE button and the the counter will indicate elapsed time of tape run. To count the elapsed time of the tape run, first press the COUNTER RESET button. This sets the counter to **00:00** and as soon as the playback or recording begins, the counter starts to show the elapsed time.

The elapsed time will be indicated on the counter even when the deck is switched to stop or pause mode, however if the deck is set to rewinding or fast-forward mode, the previous count is cleared and the counter is reset to **00:00** automatically.

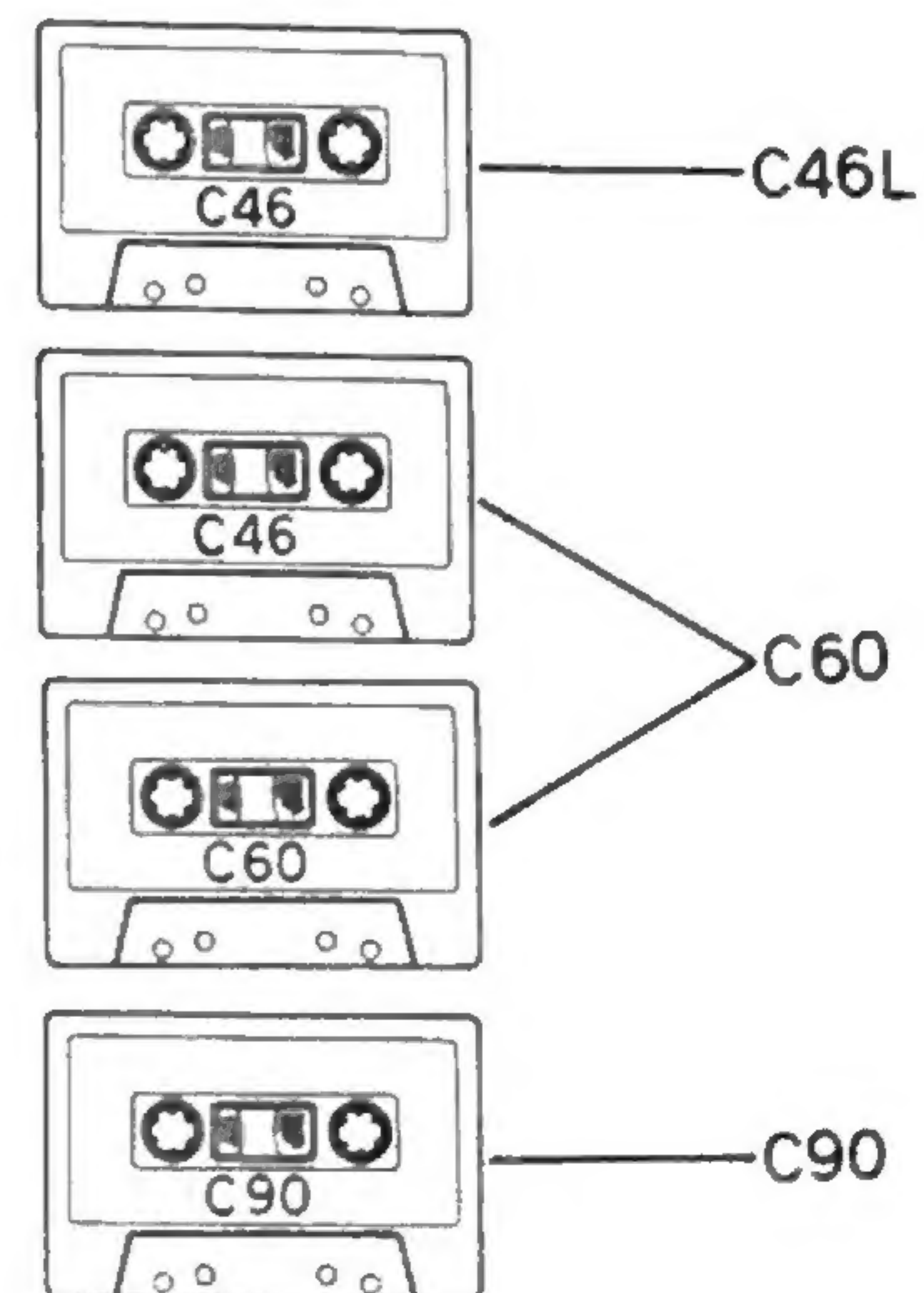
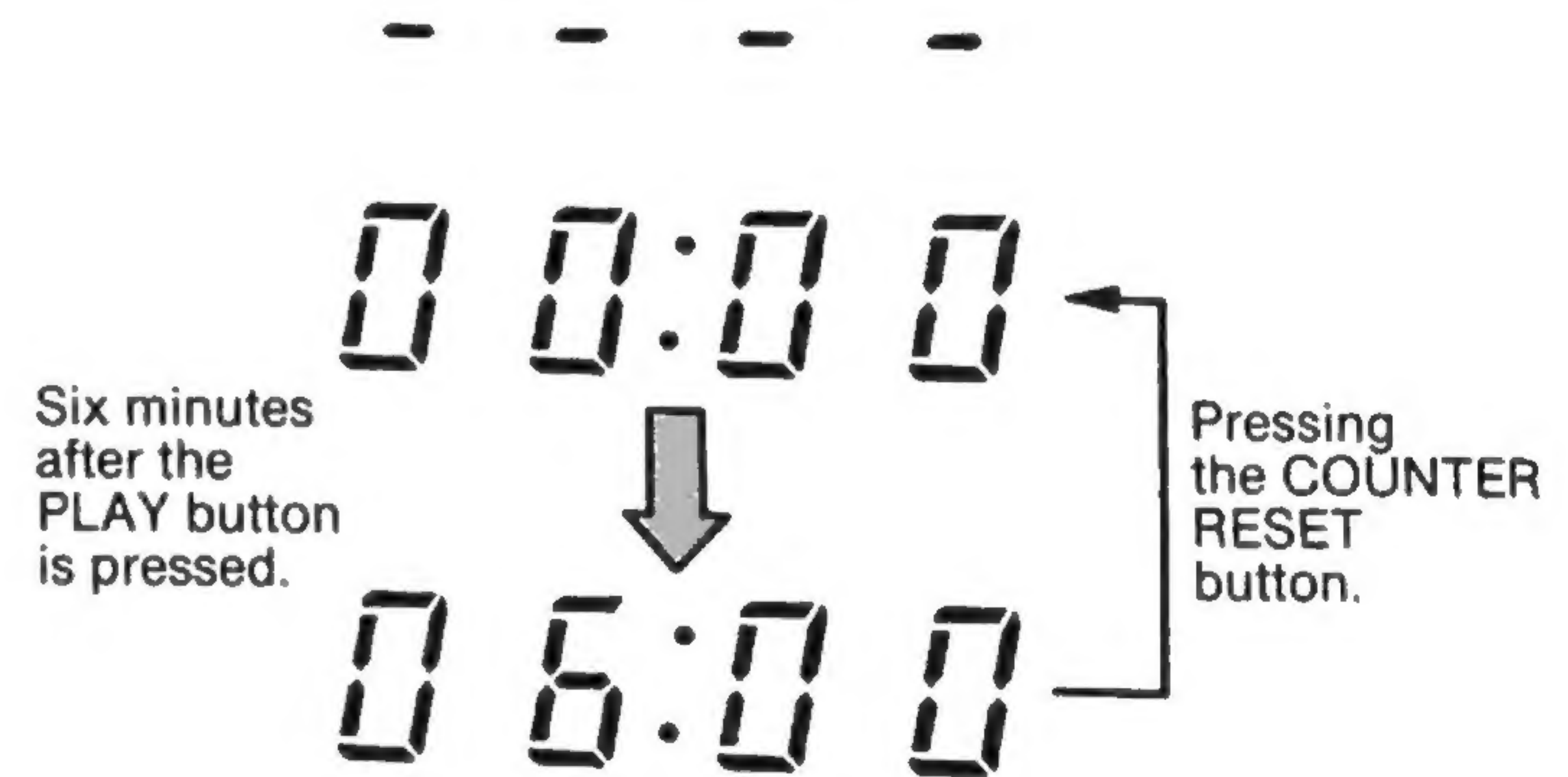
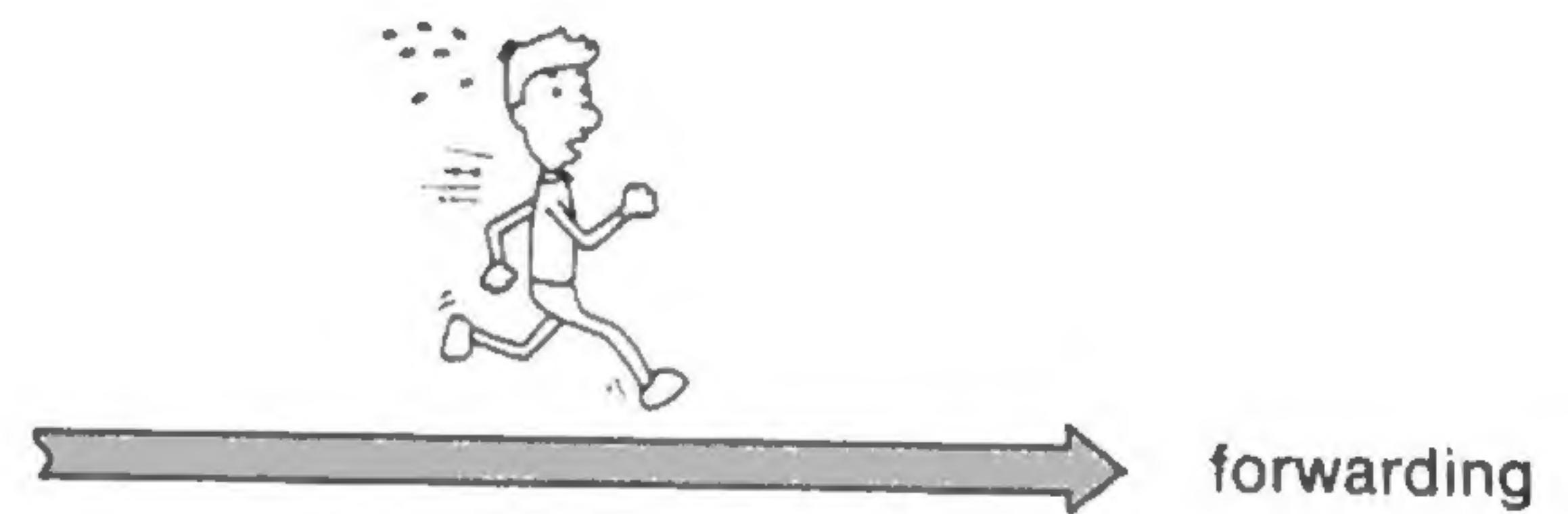
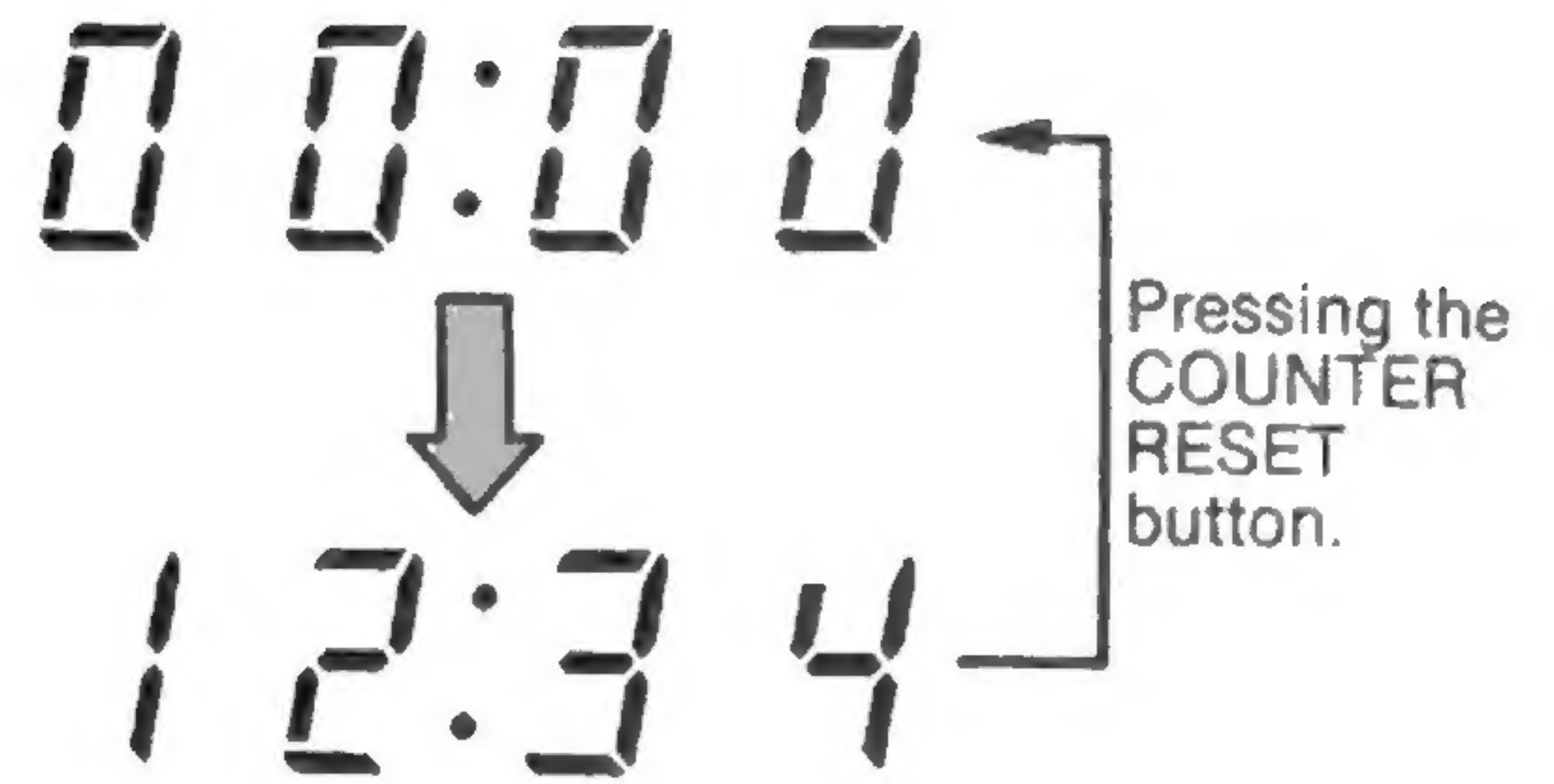
4 Tape length indication

Press the DISPLAY MODE button and the counter will indicate tape lenght.

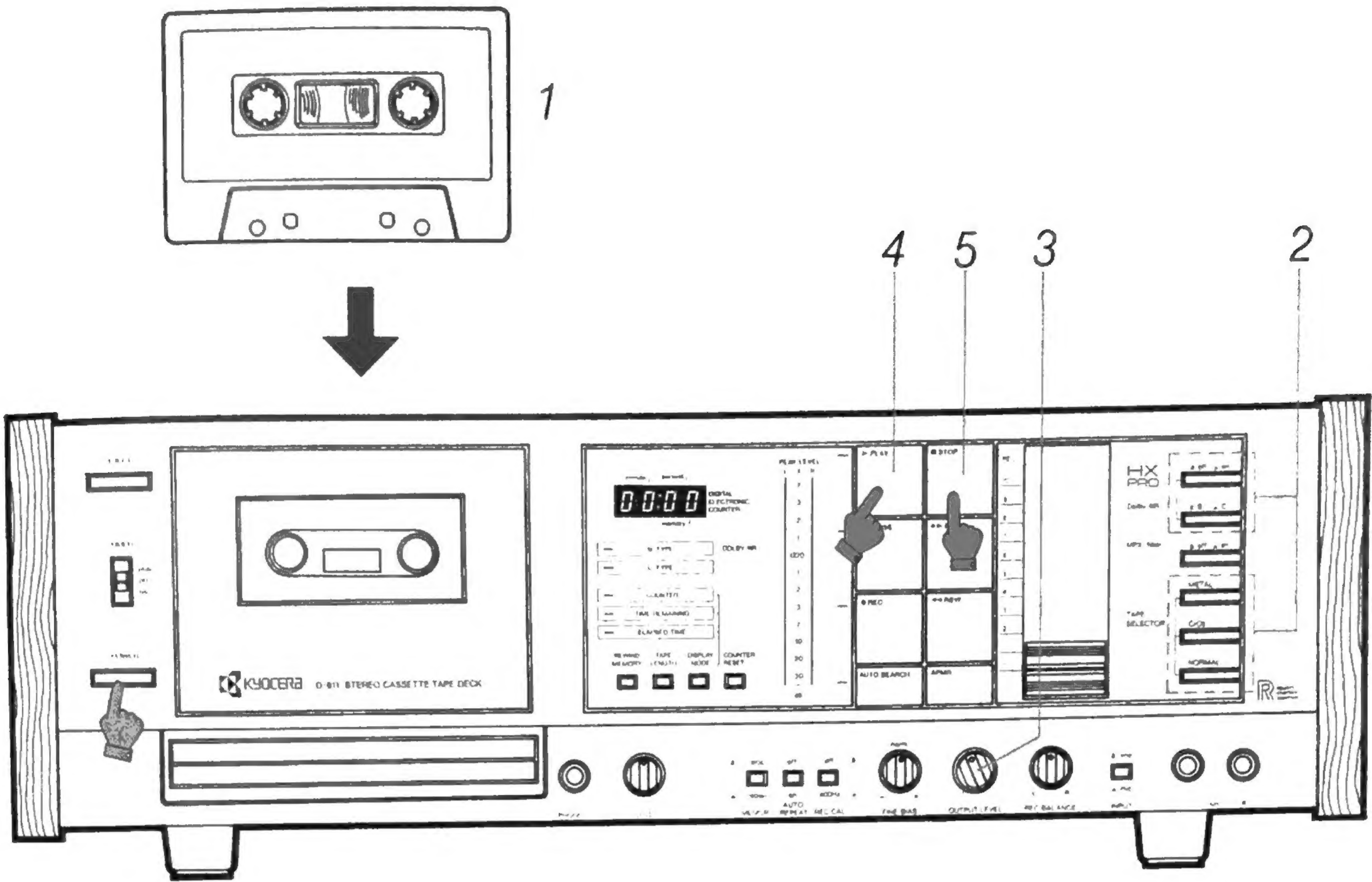
If you use a C-46 tape with "large-hub", press TAPE LENGTH button to select **C-46L** indication. If you use a conventional C-46 or C-60 tape, select **C-60** indication. If you use a C-90 tape, select **C-90** indication.

Note

Since the tape of a C-120 cassette cartridge is very thin, it is not recommended for this deck.



Operation



Turning the power on

Depress the POWER switch. The indicators will light up.

Turn on your amplifier etc. and set the tape selector switch of your amplifier to TAPE MONITOR, TAPE INPUT, etc.

Playback

- 1 Put a prerecorded cassette tape into the cassette tape compartment with the side which you want to play facing you. Then, press to close the compartment.
- 2 Set the Dolby NR buttons and the TAPE SELECTOR button according to your cassette tape.
- 3 Turn the OUTPUT LEVEL control fully clockwise.
- 4 Press the PLAY button to start playback.
- 5 To stop the playback depress the STOP button. To stop tape momentarily, press the PAUSE button (and to resume playback press the PLAY button again).

- When the tape reaches its end or if a defect within the cassette stops tape motion, the tape deck will return to the stop mode automatically.

During playback the PEAK LEVEL indicators will indicate the recorded level and hold the peak level for a while. Adjusting the OUTPUT LEVEL control changes the playback loudness, however, it does not affect the PEAK LEVEL indicator display.

Using MEMORY rewind features

The MEMORY rewind feature is useful when playing a selection on the tape of your special interest.

Press the REWIND MEMORY button at the beginning of the desired selection. You can key any point on the tape to which you later wish to return by pressing the REWIND

MEMORY button (the memory indicator in the counter lights up). To cancel memory again press the REWIND MEMORY button (the memory indicator in the counter how goes out).

● Memory stop

Set the MEMORY button to stop (released), at the end of the selection, the deck will stop and switch into the rewind mode returning the tape to the desired point and stop.

Important.

To use the memory stop feature, be sure to set the AUTO REPEAT to off (released). The auto repeat feature can override the memory stop feature when used at the same time.

● Memory replay

Set the MEMORY button to replay (depressed), at the end of the selection, stop the deck will stop and switch into the rewind mode returning the tape to the desired point and then automatically replays the selection.

Note.

After you have keyed the "start" location on the tape by pressing the REWIND MEMORY, you may use the COUNTER for the elapsed time or time remaining mode by pressing the DISPLAY MODE button. The counter will then show elapsed time or time remaining during playback however the memory rewind feature will still return the tape to the previously keyed "start" location.

Using the AUTO REPEAT feature

Using the auto repeat feature when you want to play between the tape end and any desired point on a tape or the entire side of a cassette.

Depress the AUTO REPEAT button to on (once the AUTO REPEAT is depressed, you can initiate the auto repeat operation by pressing the REW or FF button instead of the PLAY button). Press the REWIND MEMORY at the beginning of the desired selection. The deck will now playback the tape to its end stops and rewinds it to the beginning, and then begins to playback again. This routine will be repeated until the STOP button is pressed.

- If the rewind memory is not set at the beginning point the deck will repeat the entire side of a cassette automatically.

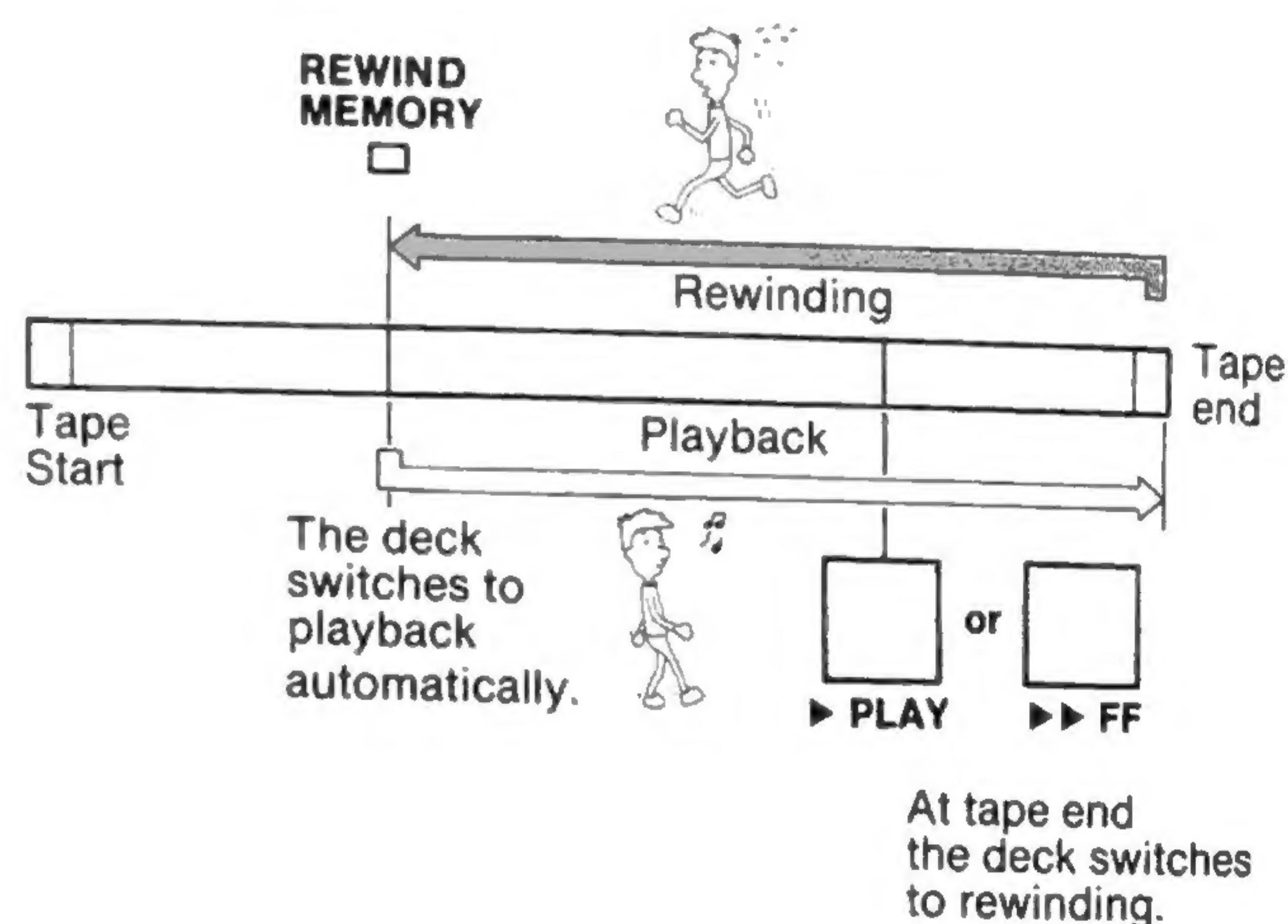
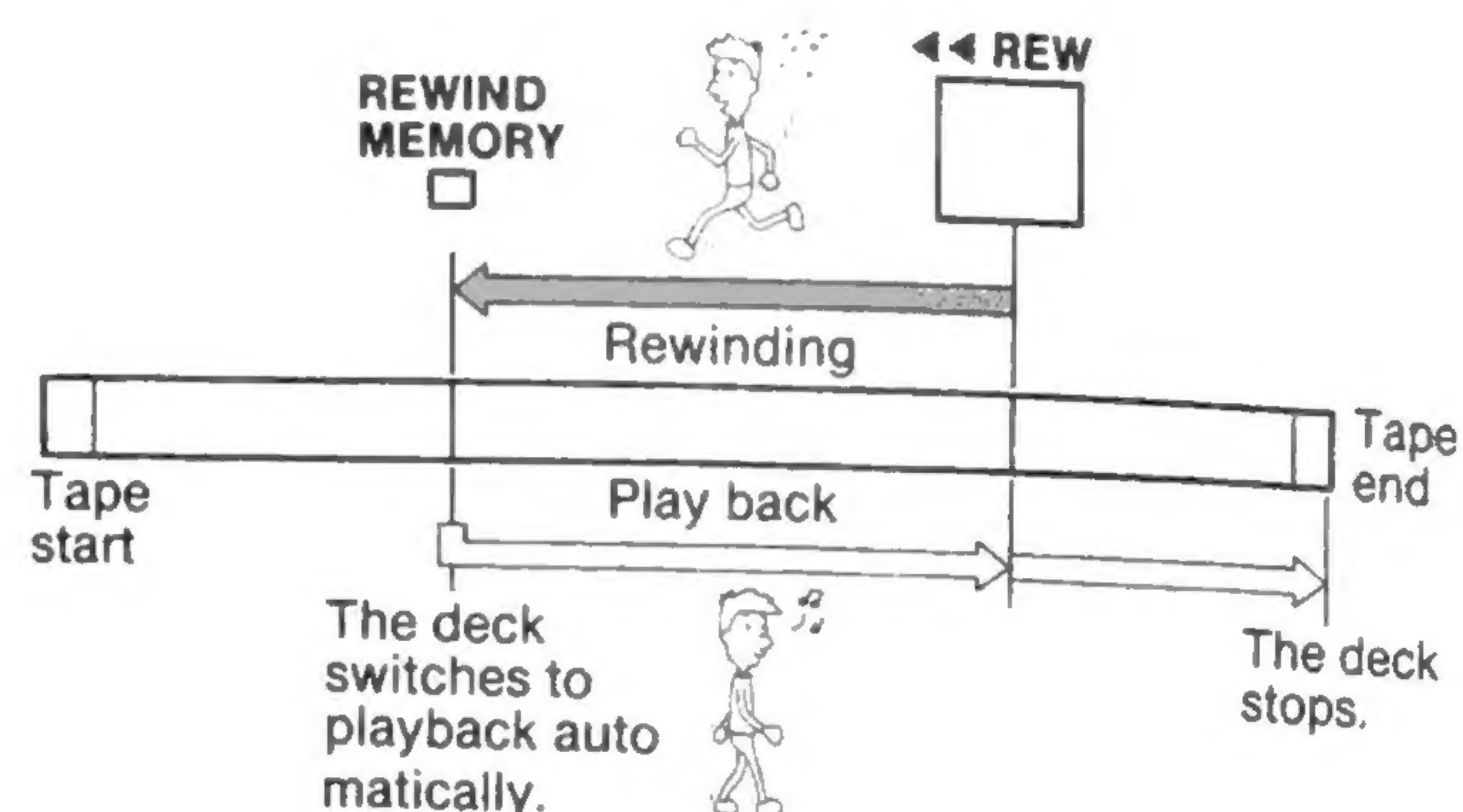
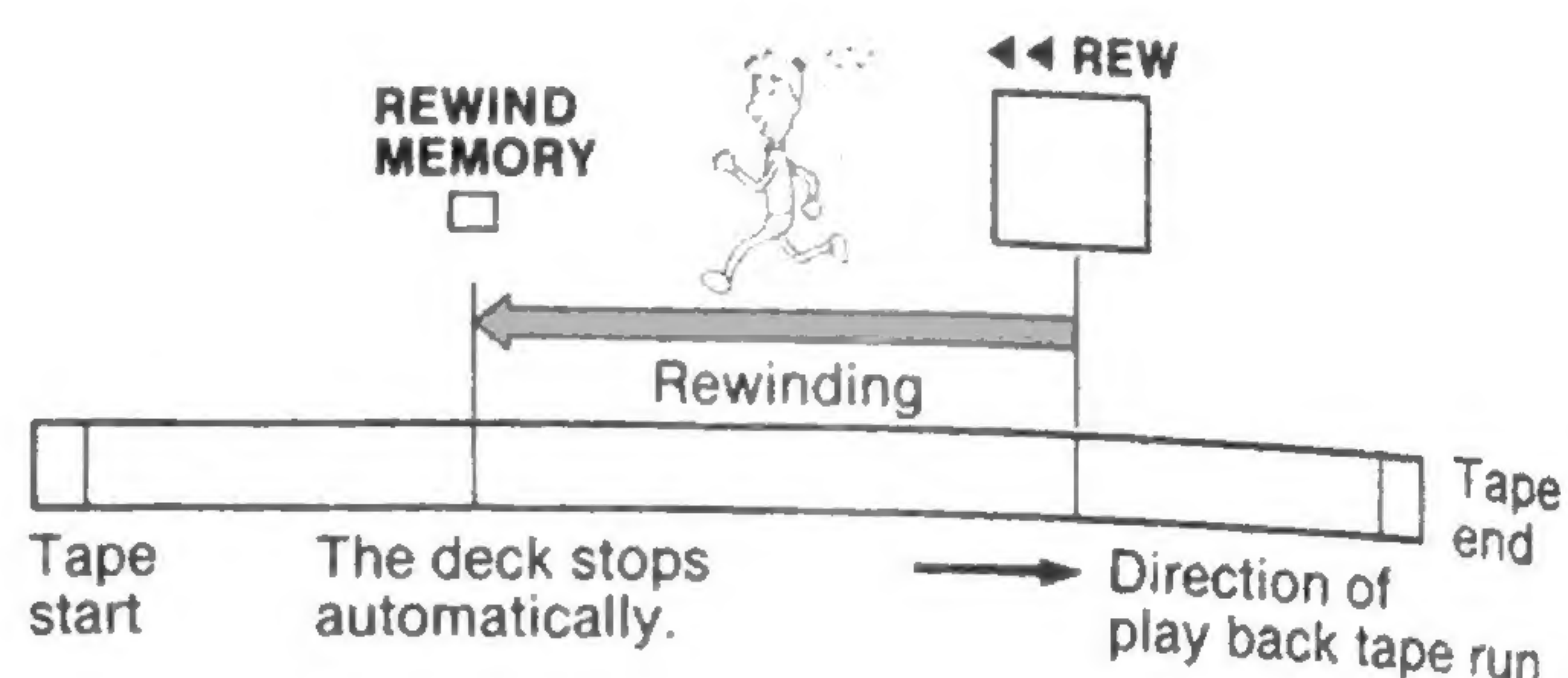
- If the memory button is released, the auto repeat mode overrides the memory stop mode and the deck will perform the auto repeat mode only.

To use AUTO SEARCH switch

The auto search feature utilizes the (5-second) unrecorded gaps to stop at the beginning of recorded programs. Set the unit to playback mode and start the tape to run. (The LED for PLAY will light up.)

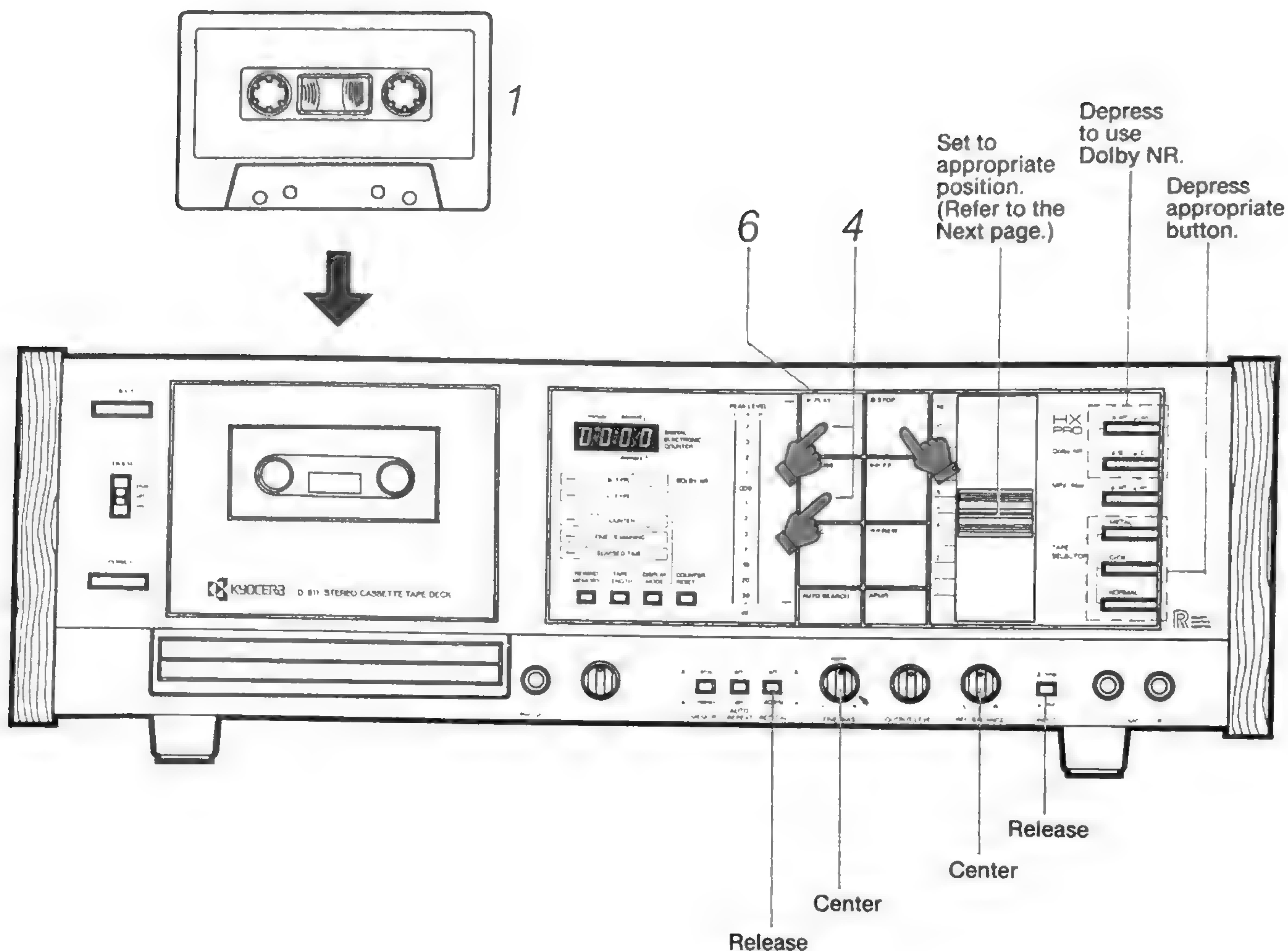
Then press the AUTO SEARCH pushbutton. (The LED for AUTO SEARCH will light up.)

The deck advances the tape in fast-forward mode and at the beginning of the next program, switches to playback. Playback of the beginning of the program continues for 10 seconds and then further advances to the next program unless the PLAY button is pressed in order to stop the search. If you wish to continue listening to that program, press the PLAY button within 10 seconds.



- The auto search operation is made possible by interprogram blanks on tape and requires each blank area to be completely free of noise or signal. Tapes that are especially noisy may produce signals (noises) in the blank intervals between programs and cause the auto search not to be activated. On the other hand, especially low level recordings may be detected as a blank. These types of conditions may prevent the auto search from distinguishing the correct blank areas between different programs. In the previous case, we recommend you use the APMR pushbutton to record more than 6 seconds of nonrecorded area between each program (See To use APMR feature section).

Recording



Recording from LINE input

1 Put a cassette tape which you want to use for recording into the compartment.

2 Set the controls as shown above.

3 Select the program source to be recorded by your amplifier's input selector, etc. (To record from microphones, see "Recording from microphones".)

4 While holding the PAUSE button down, press the REC button. This places the deck into recording/pause mode and the indicators for PAUSE (orange) and REC (red) will light up.

• You can immediately begin recording without using the recording/pause mode by pressing the REC button, while holding the PLAY button instead of the PAUSE button.

5 Play a section of the program you wish to record. Using the REC level control, adjust the recording level so that the illumination of the level indicators remains mainly in the green portion during the majority of the program.

6 To start recording, once the levels are set, press the PLAY button.

• To stop the recording temporarily, press the PAUSE button. Press the PLAY button to resume recording.

7 To stop recording, press the STOP button.

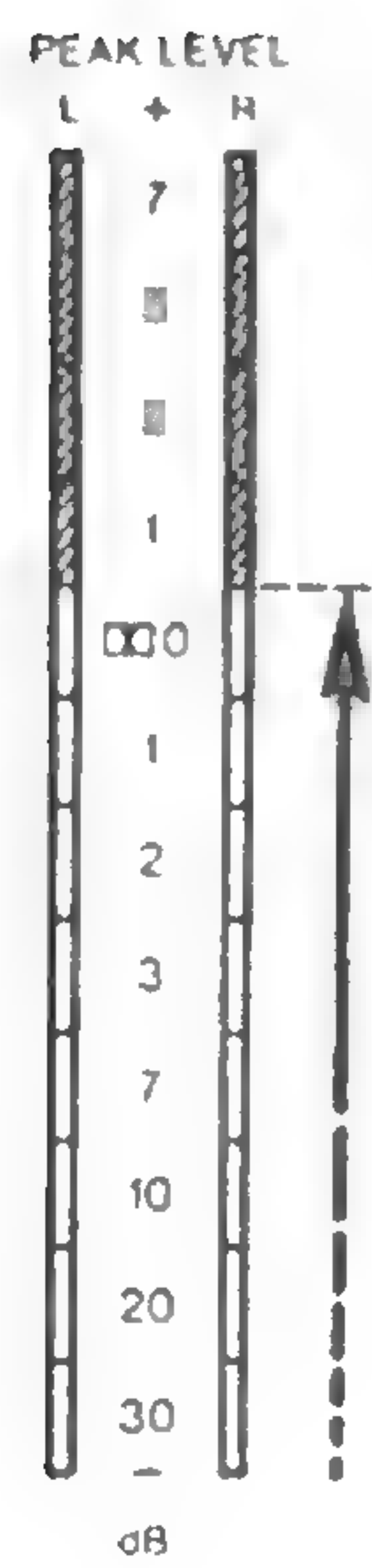
Recording from microphones

To record from microphones, use the same operating procedures as previously stated, except plug microphones into the MIC L-R jacks and depress the recording INPUT selector button (line/mic) to mic.

To make a monophonic mic recording, plug a microphone into either the MIC L or R jack only, and the signal from the microphone will be channeled to both the left and right inputs and recorded on both channels.

Recording level adjustment

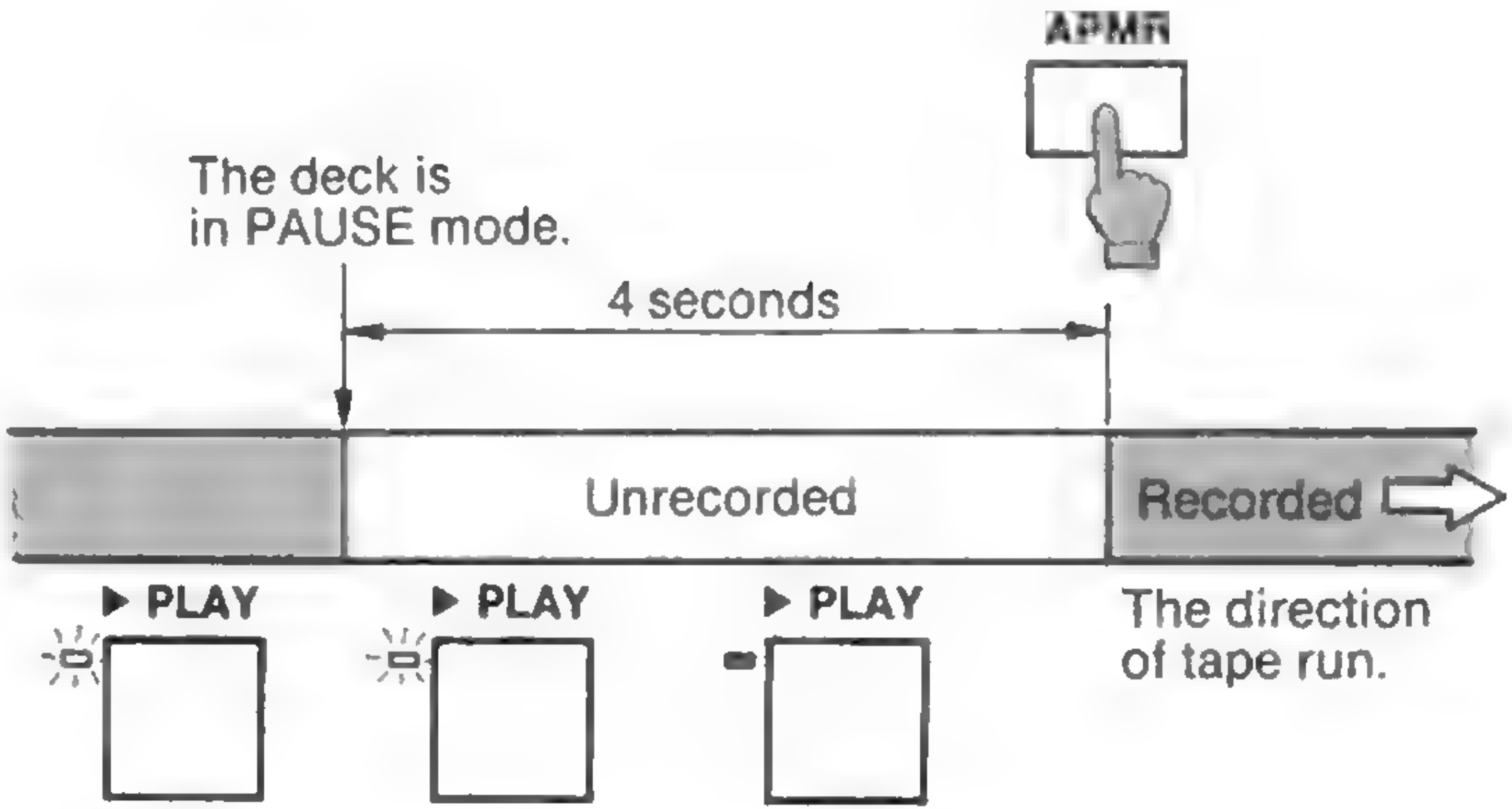
Setting the recording level is one of the important factors of recording. The REC level control should be adjusted so that the illumination of the PEAK LEVEL indicators remains mainly in the green portion during the majority of the program. Brief excursions into the red area will be inaudible but if the level is too high and the red indicators always lights up, the recorded sound will be distorted. Recordings at too low level on the other hand, will result in having to turn up the playback volume of your amplifier to a higher level, revealing more of the background hiss. In conclusion, the closer you can record to 0dB point, the better the recorded quality. Do not continuously adjust the controls during recording. Try to get the best level setting before the actual recording.



To use APMR feature

Automatic Program Mute Recording is a system built into your deck to provide 4 second unrecorded gaps between the recorded program portions in the tape when in record mode. The capability of APMR of creating unrecorded portions in a tape is a real advantage. For instance, you may wish to record a complete program with controlled spacing between programs for the autosearch feature. These blank portions on a tape can be easily created using the APMR button.

During recording when you want the erased portion to begin, just press the APMR button. Now the LED for PLAY turns on and off and the tape continues to run but it is erased for 4 seconds. The deck then switches to the record/pause mode. When you want to begin recording the next selection, just press the PLAY button and normal recording will resume.



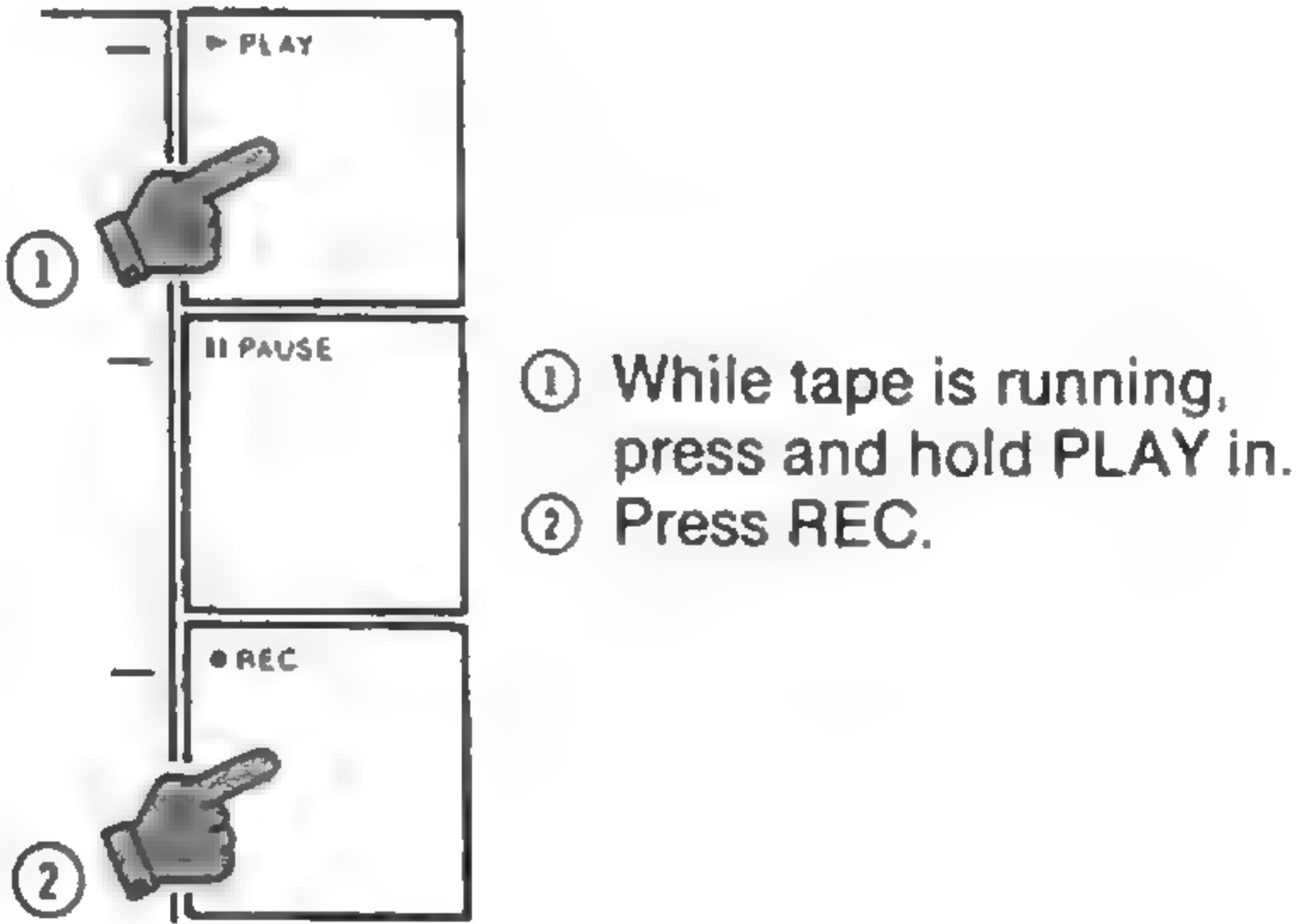
- To make unrecorded portion longer than 5 seconds, press the APMR button for necessary time.

Erase

A previously recorded tape will automatically erase when you make a new recording on it. Alternatively, it can be erased completely by recording on it with the REC level control set to 0.

Punch-in recording

During playback, you can go from playback mode to record mode by holding in the PLAY button and simultaneously pressing the REC buttons (or in reverse manner, holding in the REC button and simultaneously pressing the PLAY button). Now recording will start from that location. This operation allows you to record over or correct a recorded section of the tape without pressing the STOP button initially.



Recording FINE BIAS adjustment

This control compensates for tolerance between tapes available world-wide by slightly adjusting the recording bias level for the left and right channels simultaneously. The norm position has been factory-adjusted for best performance obtained from premium cassette tapes. If you are recording on a specific tape and find an excess in high frequency response when it is played back, try to set

this control towards the plus (+) mark (clockwise) and make a new recording to check that the flat response is obtained when played back. On the other hand, if an inferior high frequency response is noted, set this control to minus (-) mark (counter-clockwise) setting and make a new recording to check that the response is obtained when played back.

Recording calibration

The best possible recording performance to be expected with your tape deck may be obtained if the uncompromised conformity between levels of recording and playback is achieved, especially when the ideal performance of the noise reduction system is desired. Your tape deck has been factory-adjusted for good-quality premium tapes so that exactly the same output level is obtained when recordings are made on these tapes. However, few kinds of tapes will not permit the conformity between the recording and playback levels, unless a recording calibration procedure is followed by using the built-in 400Hz calibration tone system.

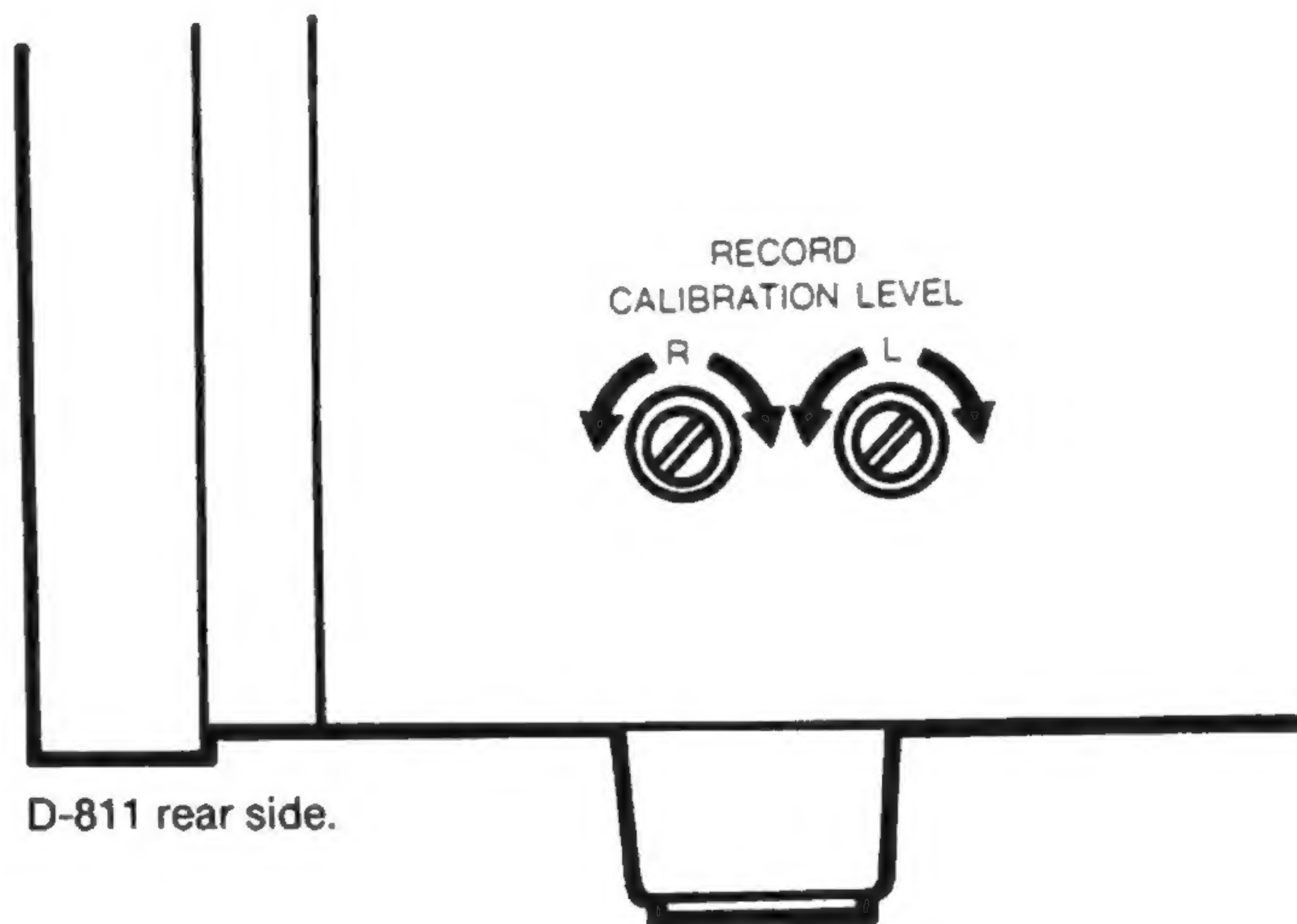
Important

This adjustment will not normally be required if you are using regular cassette tapes of premium brands.

- 1 Put a cassette tape into the compartment on which you wish to make a recording level calibration and set the controls as illustrated in Recording section.
- 2 Depress the REC CAL button. This cuts off any recording input signals from the INPUT jacks or MIC jacks, and introduces a 400Hz calibration tone to be recorded onto the tape.
- If you are monitoring the recording output on your amplifier, initially reduce the volume to very low.
- 3 While holding the REC button down, press the PLAY button. Now the tape starts to run and the PEAK LEVEL indicators show 0 (Dolby NR mark) dB point to indicate that the 400Hz calibration tone is being recorded onto the tape at that level of 0dB.
- 4 Allow the tape to run approximately 10 seconds (use the ELAPSED TIME mode of the counter for your convenience) and then press the STOP button.
- 5 Press the REW button to return the tape to the point at which the recordings was started (use the REWIND MEMORY function) and press the PLAY button to playback.
- 6 During the playback, if the PEAK LEVEL indicators indicate the 0 (Dolby mark) dB point., you have determined that the conformity of the levels are complete. Reset the REC CAL button to released position and begin the recording.

If the level at the playback is higher than 0dB: Locate the RECORD CALIBRATION LEVEL (R-L) controls on the rear of the unit, and using a screwdriver which has a minus (-) head, turn the R (right channel) control slightly counter-clockwise (turn approx. 10° at a time). Retrace the same steps as explained above and make recording, then playback to check that the indicators show 0dB. If necessary, repeat above steps in trial-and-error basis until the indicators show 0dB. After the calibration on the right channel is completed, perform same steps on the left channel adjusting the L (left) control.

If the level at the playback is lower than 0dB: Turn the L and R controls clockwise (approx. 10° at a time), and perform the same steps as in the case of the level being higher.



About the Dolby NR B-type and C-type

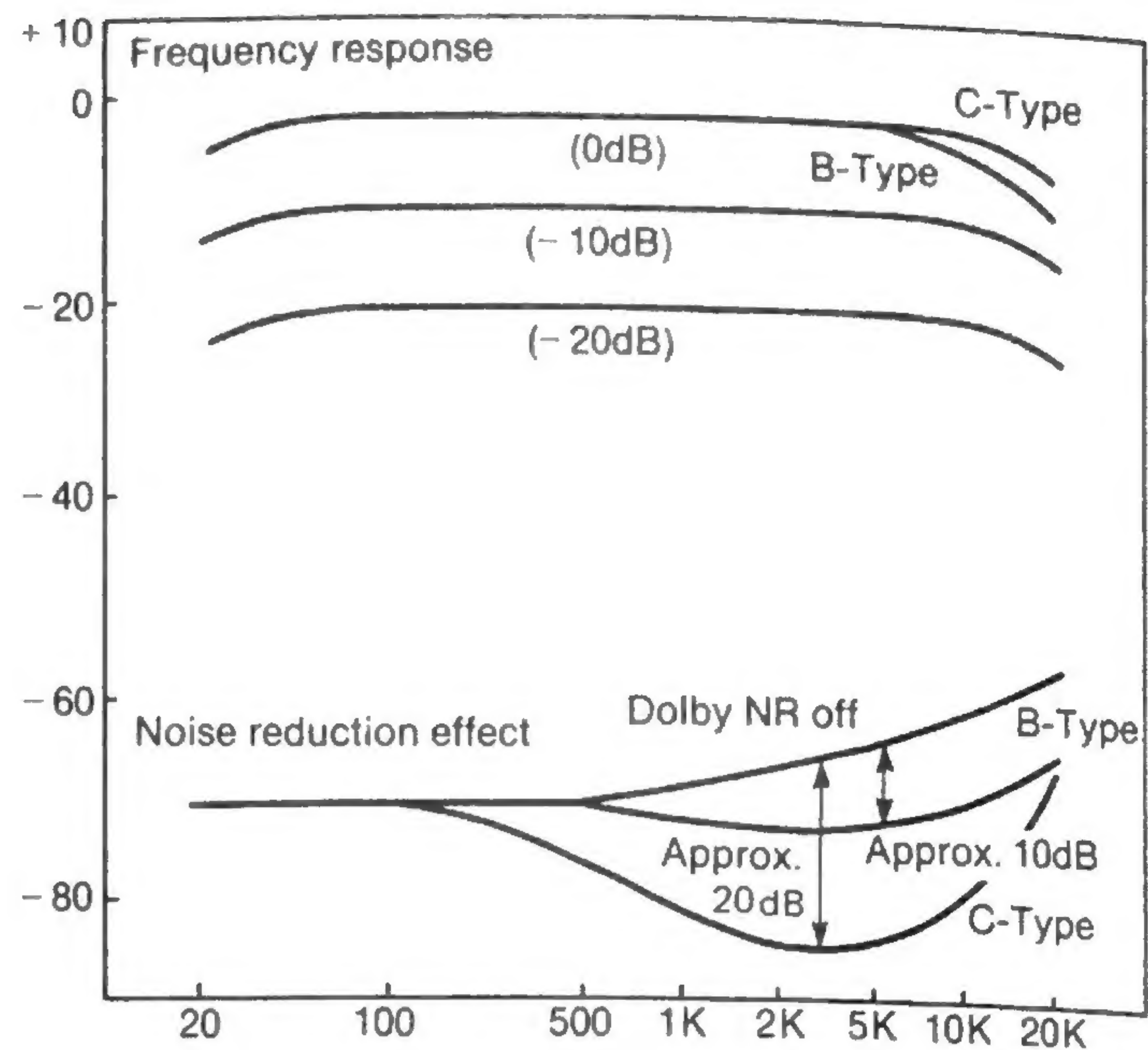
Your cassette deck is equipped with both Dolby C-type and B-type noise reduction. The Dolby C-type NR system provides noise reduction beginning at 100Hz and rising to 20dB at 1kHz and above. The standard Dolby B-type NR system, used in virtually every high-performance tape deck for the past several years, provides noise reduction beginning at about 50Hz, rising to 10dB at 4kHz and above.

With Dolby C-type NR and a good tape formulation, tape noise is below that of just about any program material you might record, including music with very wide dynamic range. Standard Dolby B-type NR will allow you to play cassettes previously recorded with it, and to make cassettes you know will be played primarily on machines equipped with only with Dolby B-type NR.

Dolby C-type NR achieves more noise reduction than Dolby B-type by boosting low-level higher frequencies, and lowering them again on playback, by a greater amount than Dolby B-type.

Suggestions to use Dolby noise reduction

- 1 Select Dolby C-type when playing cassettes previously recorded with it, and when making recordings for playback primarily on this recorder and others equipped with Dolby C-type. If you also expect to play the tape occasionally on a tape deck equipped with Dolby C-type, as you are likely to find it enjoyable when played with Dolby B-type NR.
- 2 Select Dolby B-type NR when playing cassettes previously recorded with Dolby B-type, and when making recordings which will be played primarily on machines equipped with only Dolby B-type NR.

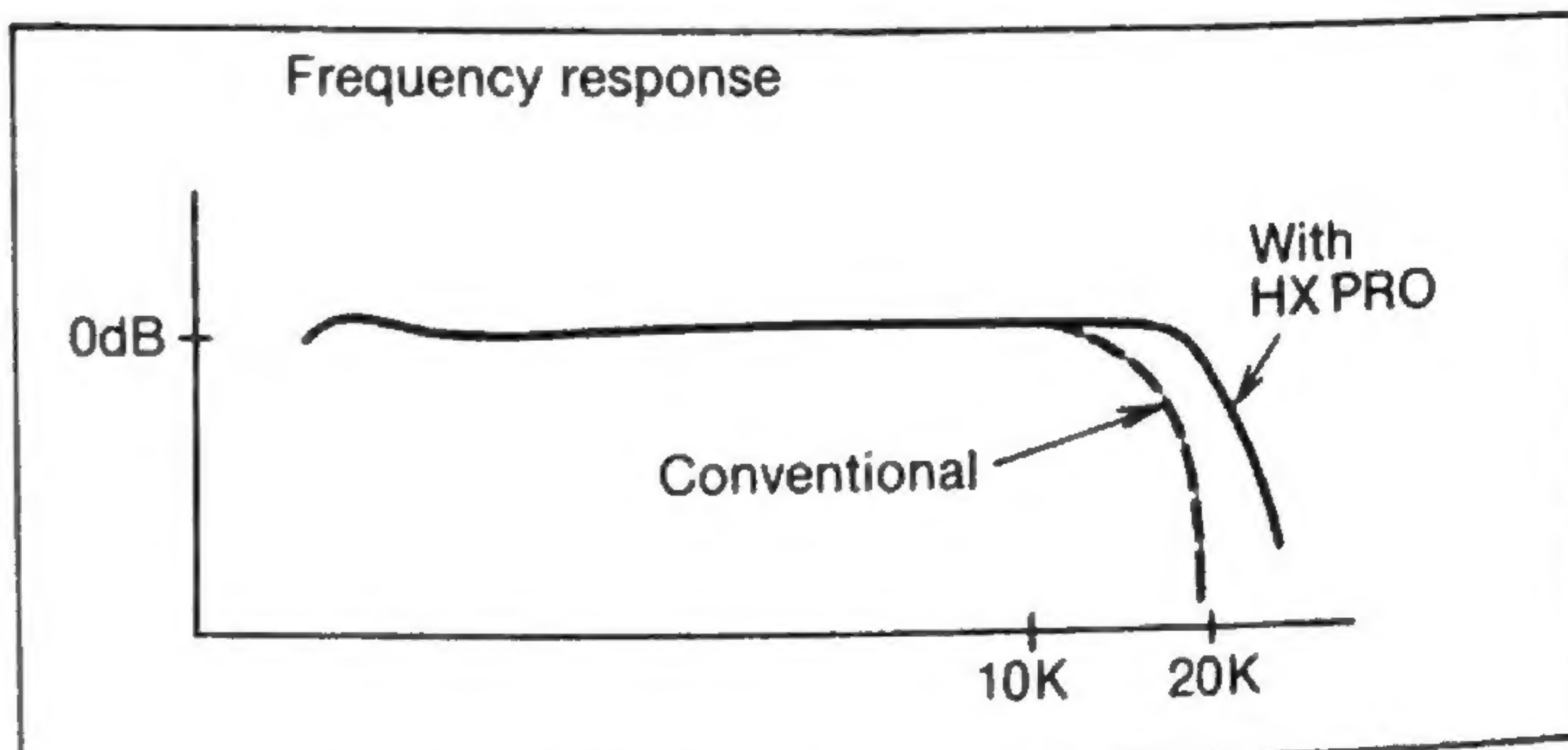
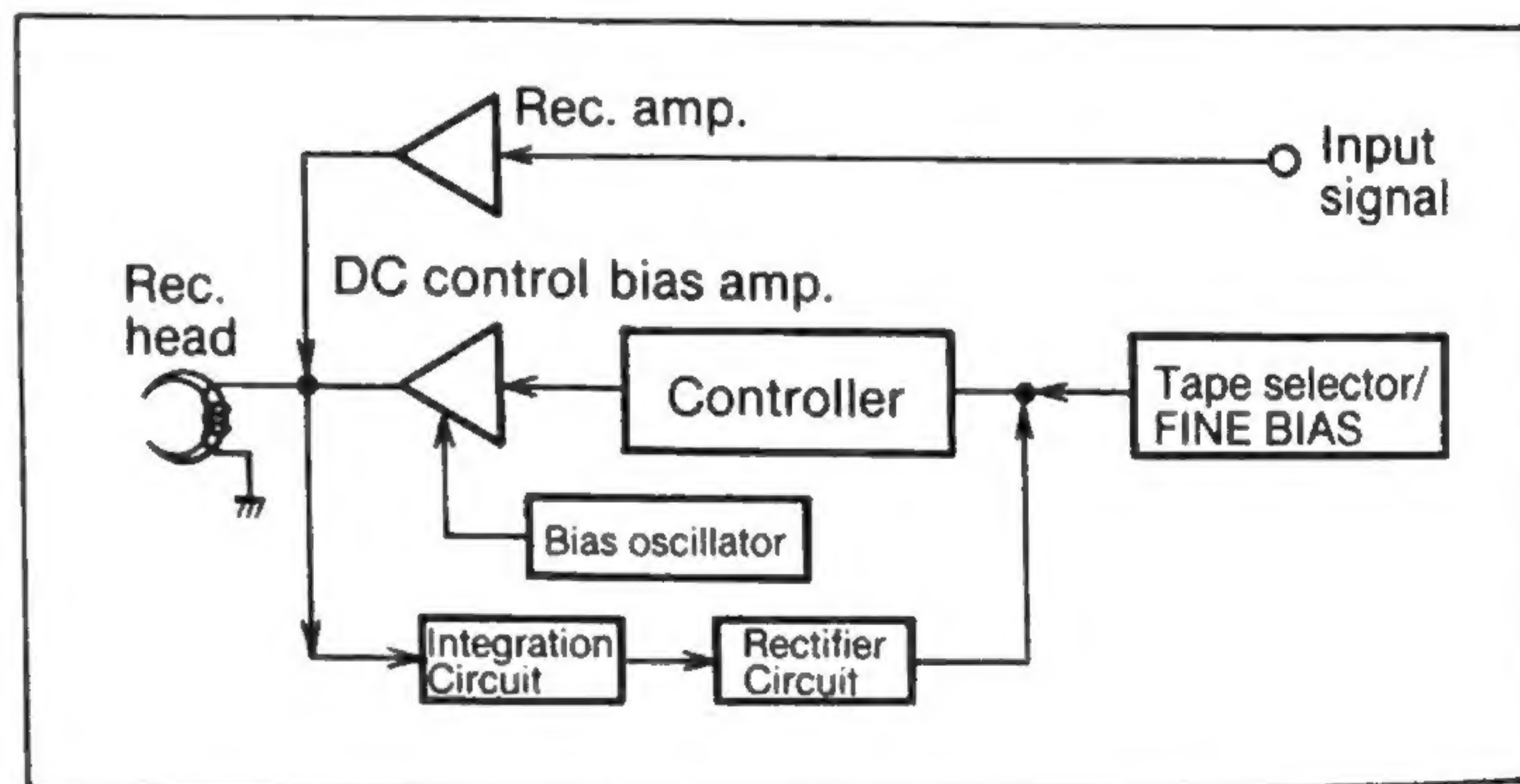


- 3 Switch the Dolby NR button off (released) when playing back cassettes recorded without any noise reduction.
- 4 Switch the MPX filter switch on (depressed) whenever recording an FM stereo broadcast with either noise reduction system. This filter, which provides virtually flat response at 15kHz but rolls off sharply above 16kHz, will prevent inaudible FM stereo subcarrier components from reaching the NR circuits and causing insufficient noise reduction action.

About the HX PRO headroom extension system

In a conventional system, as the bias current level is fixed, sometimes the bias current level is too high for the high frequency range, even if the level is optimum for the low frequency range, and thus the frequency response of the high frequency range becomes poor. The HX PRO system solves this dilemma by controlling the bias current level to the optimum point according to the level and frequency spectrum of the music signal. Thus HX PRO can improve the dynamic range and distortion over the entire audio frequency range.

- HX PRO system works in the recording mode only. When you playback a tape recorded with the HX PRO system, you can enjoy its dynamic sound quality even with other tape decks.



Maintenance

Note: Please note that the cassette compartment door when open has been designed to allow adequate access to the tape mechanism for easy cleaning of the tape heads and capstan, therefore there is no need to remove the door for this purpose as it would result in damage to the door securing devices.

The capstan and heads (see illustration) on your tape deck should be cleaned after every 10 to 20 hours of use to prevent the build-up of dirt and oxides from the tape which will interfere with proper functioning. Oxides on the record/playback head can cause a significant reduction of the treble content of taped program.

Demagnetizing

The tape heads and capstan must be demagnetized after approximately 50 hours of use. Failure to do so will result in increased background noise and reduction of high frequencies.

Troubleshooting guide

The following guide is intended as an aid in correcting problems encountered during the use of your tape deck.

Problem/Cause

No sound comes out when pressing PLAY button.

- 1 INPUT/OUTPUT connection is not proper.
- 2 OUTPUT LEVEL control or PHONES LEVEL is turned fully counter-clockwise.
- 3 PAUSE button is pressed.

Recording is not possible.

- 1 Recording level control is set to 0.
- 2 INPUT selector of the receiver or amplifier is not at the proper position.
- 3 PAUSE button is pressed.
- 4 REC CAL button is pressed.

Memory operation does not operate properly.

- 1 COUNTER RESET button or REWIND MEMORY button should be checked for proper setting.

TIME REMAINING counter is reset improperly.

- 1 TAPE LENGTH SELECTOR switch is improperly switched.

Tape rewind stops suddenly.

- 1 MEMORY(stop-replay) button is set to "stop".

Serviceing information

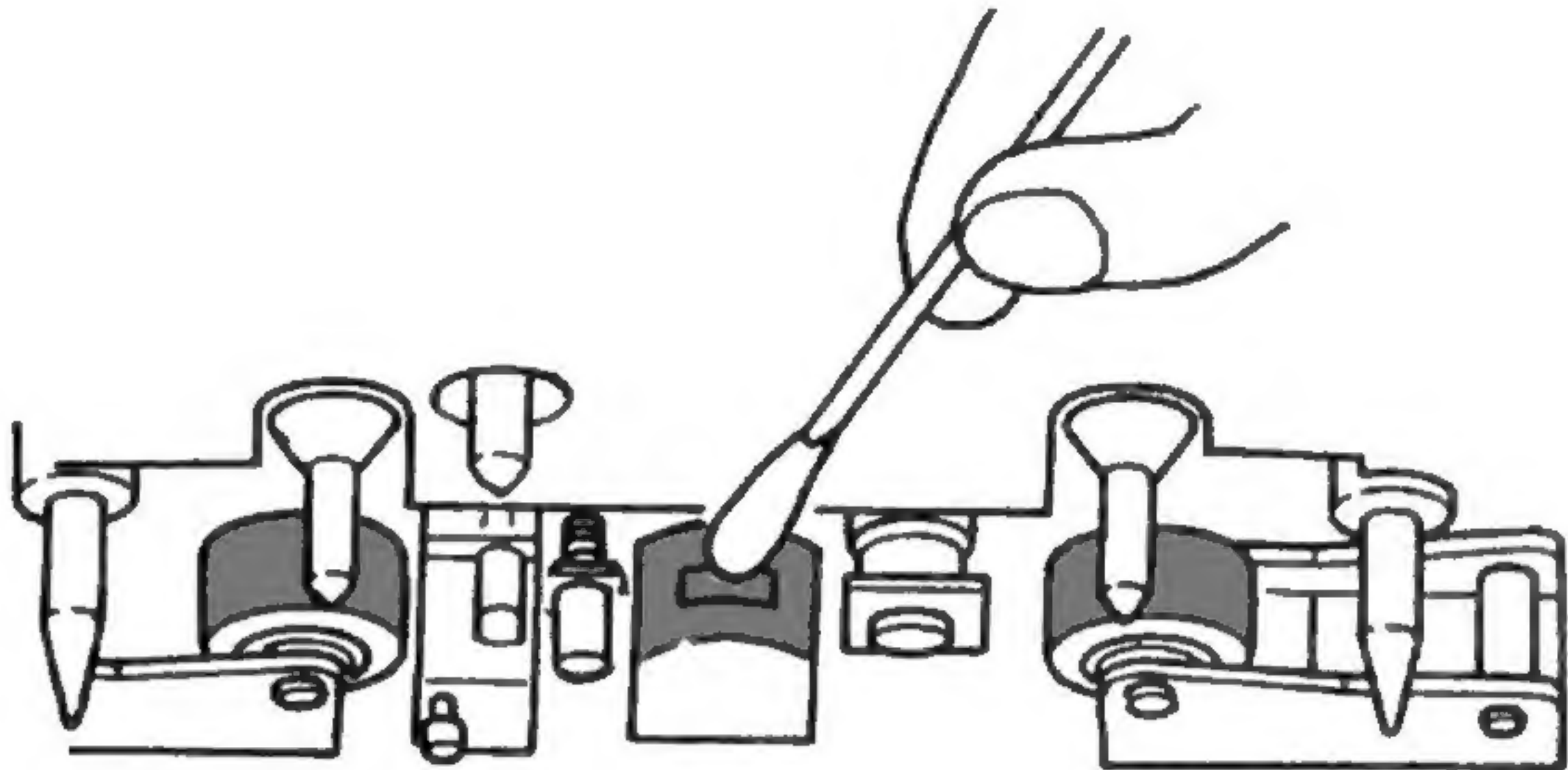
Should your Kyocera product need repair, please contact your authorized Kyocera dealer or the following directly.

Kyocera Electronics Inc.
Service Center:
100 Randolph Road, Box CN6700 Somerset,
N.J. 08873-1284
Telephone: 201-560-0060

Cleaning

Refer to the Cleaning diagram. Lightly wipe the two metal heads and the metal capstans with a cotton swab dipped in denatured alcohol. Repeat wiping until the swab comes away clean.

● **Caution:** Do not use denatured alcohol on the rubber rollers. This will cause the rubber to harden and crack. Instead, clean the rubber pinch roller with one of the formulations specially prepared for this application. Check with your Kyocera dealer as there are various cassette-shaped products on the market specially designed to clean the tape heads and capstans.



Specifications

Recording system	105kHz AC bias
Erasure system	AC type
Frequency response ($\pm 3\text{dB}$)	METAL: 20 – 22,000Hz CrO ₂ : 20 – 20,000Hz NORMAL: 20 – 20,000Hz
S/N ratio (DIN 45500, 70 μsec . Tape EQ, weighted-A)	58dB(METAL, NR out)
Dolby noise reduction effect (CCIR filtered)	B-type: 10dB(METAL) C-type: 20dB(METAL)
Recording input sensitivity	mic: 0.5mV line: 70mV
Output level	OUTPUT: 580mV PHONES: 100mV
Harmonic distortion (at 1kHz)	1.5%
Separation (at 1kHz)	40dB
Erasure effect (at 1kHz)	70dB
FINE BIAS adjustable range	$\pm 15\%$
Wow and flutter (JIS WRMS)	0.02%
Tape speed tolerance (MTT-111)	$\pm 0.5\%$
Rewind/fast-forward time (C-60)	75 seconds
Dimesions	Width, 18-1/8"(460mm) Heght, 5-3/16"(132mm) Depth, 12-1/8"(308mm)
Weight	18 lbs. 1 oz.
Accessories	A pair of audio cables

Beacuse KYOCERA continually strives to improve its products, specifications and features are subject to change without notice.



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